

18. COMPARISON OF ACTUAL TO ESTIMATED TOTALS

In successive budgets, the Administration publishes several estimates of the surplus for a particular fiscal year. Initially, the year appears as an outyear estimate at the end of the budget horizon. In each subsequent budget, the year advances in the estimating horizon until it becomes the “budget year.” One year later, the year becomes the “current year” then in progress, and the following year, it becomes the just-completed “actual year.”

The budget is legally required to compare budget year estimates of receipts and outlays with the subsequent actual receipts and outlays for that year.¹ Part I of this chapter meets that requirement by comparing the

actual results for 2001 with the current services estimates shown in the 2001 Budget published in February 2000.

Part II of the chapter presents a broader comparison of estimates and actuals. This part first discusses the historical record of budget year estimates versus actuals over the last two decades. Second, it broadens the focus to estimates made for each year of the budget horizon, extending four years beyond the budget year. This broader focus shows the growth in differences between estimates and the eventual actual results as the estimates extend further into the future.

PART I: COMPARISON OF ACTUAL TO ESTIMATED TOTALS FOR 2001

This part of the chapter compares the actual receipts, outlays, and surplus for 2001 with the current services estimates² shown in the 2001 Budget published in February 2000. This part also presents a more detailed comparison for mandatory and related programs, and reconciles the actual receipts, outlays, and surplus totals shown here with the figures for 2001 previously published by the Department of the Treasury.

Receipts

Receipts in 2001 were \$1,991.0 billion, which is \$18.9 billion less than the current services estimate of \$2,009.9 billion in the 2001 Budget. As shown in Table 18–1, this shortfall was the net effect of legislative and administrative changes; economic conditions that differed from what had been expected; and technical factors that resulted in different collection patterns and effective tax rates than had been assumed.

Table 18–1. COMPARISON OF ACTUAL 2001 RECEIPTS WITH THE INITIAL CURRENT SERVICES ESTIMATES

(In billions of dollars)

	Feb. 2000 estimate	Enacted legislation/ administrative actions	Different economic conditions	Technical factors	Net change	Actual
Individual income taxes	978.2	–40.6	17.0	39.7	16.1	994.3
Corporation income taxes	189.6	–31.9	8.2	–14.8	–38.5	151.1
Social insurance and retirement receipts	682.5	–0.4	6.7	5.2	11.5	694.0
Excise taxes	69.4	–0.5	1.0	–3.8	–3.3	66.1
Estate and gift taxes	32.0	.....	0.3	–3.9	–3.6	28.4
Customs duties	22.2	–0.7	–0.9	–1.2	–2.8	19.4
Miscellaneous receipts	36.0	.....	0.8	1.0	1.8	37.8
Total	2,009.9	–74.2	33.0	22.3	–18.9	1,991.0

¹These requirements, for receipts and “uncontrollable outlays,” are in 31 USC 1105(a)(18) through (20).

²The current services concept is discussed in Chapter 15: “Current Services Estimates.” For mandatory programs and receipts the February 2000 current services estimate is based

on laws then in place. For discretionary programs the current services estimate is based on enacted appropriations adjusted for inflation.

Policy differences.—The Economic Growth and Tax Relief Reconciliation Act of 2001 reduced 2001 receipts by \$68.1 billion (see Chapter 4: “Federal Receipts” for a description of this Act). Other legislative and administrative changes, including the extension of filing deadlines for taxpayers adversely affected by the terrorist attacks of September 11, 2001, reduced 2001 receipts relative to the February 2000 current services estimate by an additional \$6.1 billion.

Economic differences.—Differences between the economic assumptions upon which the current services estimates were made and actual economic performance accounted for a net increase in 2001 receipts of \$33.0 billion.³ Higher-than-anticipated wages and salaries and other sources of personal income were in large part responsible for the increases in individual income taxes and social insurance and retirement receipts of \$17.0 billion and \$6.7 billion, respectively. Increased corporation income taxes, attributable to higher-than-expected corporate profits, increased 2001 receipts by an additional \$8.2 billion relative to the February 2000 estimate. Higher-than-estimated levels of gross domestic product (GDP), which affect excise taxes, and higher-than-expected interest rates, which affect deposits of earnings by the Federal Reserve (miscellaneous receipts), increased receipts above the budget estimates by an additional \$1.0 billion and \$0.8 billion, respectively. Customs duties were \$0.9 billion below the budget estimate, reflecting lower-than-expected imports.

Technical reestimates.—Technical factors increased 2001 receipts a net \$22.3 billion above the February 2000 current services estimate. This net increase was attributable to higher-than-anticipated collections of individual income taxes, social insurance and retirement receipts, and miscellaneous receipts, which were partially offset by lower-than-anticipated collections of corporation income taxes and other sources of receipts.

³Changes in economic assumptions between the 2001 and 2002 Budgets, reflecting improvements in the economic outlook over that period, increased the estimate of receipts by \$54.2 billion. This improvement was offset by weaker-than-expected economic outcomes subsequent to the 2002 budget, which reduced receipts by \$21.2 billion.

Higher effective tax rates on personal income than estimated in February 2000, and the effect of the stock market on capital gains, were primarily responsible for the net increase in individual income taxes of \$39.7 billion. Higher-than-expected collections of payroll taxes, attributable in large part to adjustments for prior year receipts, partially offset by lower-than-expected unemployment insurance receipts, increased social insurance and retirement receipts a net \$5.2 billion above the budget estimate. Different collection patterns and effective tax rates than assumed in February 2000 were primarily responsible for the lower-than-anticipated collections of corporation income taxes of \$14.8 billion.

Outlays

Outlays for 2001 were \$1,863.9 billion. This was \$25.2 billion more than the \$1,838.8 billion current services estimate in the 2001 Budget (February 2000).

Table 18–2 distributes the \$25.2 billion net increase in outlays among discretionary and mandatory programs and net interest.⁴ The table also makes rough estimates according to three reasons for the changes: policy; economic conditions; and technical estimating differences, a residual.

Policy changes are the result of legislative actions that change spending levels, primarily through higher or lower appropriations or changes in authorizing legislation. For 2001, policy changes increased outlays an estimated \$41.7 billion relative to the initial current services estimates.

Policy changes increased discretionary outlays by \$18.0 billion, because outlays from final appropriations were above the initial current services estimates. Defense discretionary outlays increased by \$7.6 billion and nondefense discretionary outlays increased by \$10.4 billion. Policy changes increased mandatory outlays by \$20.6 billion above current law. The largest changes

⁴Discretionary programs are controlled by annual appropriations, while mandatory programs are generally controlled by authorizing legislation. Mandatory programs are mostly formula benefit or entitlement programs with permanent spending authority that depend on eligibility criteria, benefit levels, and other factors.

Table 18–2. COMPARISON OF ACTUAL 2001 OUTLAYS WITH THE INITIAL CURRENT SERVICES ESTIMATES

(In billions of dollars)

	Current Services (Feb. 2000)	Changes				Actual ¹
		Policy	Economic	Technical	Total changes	
Discretionary:						
Defense	295.2	7.6	.....	3.4	10.9	306.1
Nondefense	340.3	10.4	.....	–7.5	2.9	343.3
Subtotal, discretionary	635.5	18.0	.....	–4.1	13.8	649.3
Mandatory:						
Social Security	422.2	5.5	3.4	–1.7	7.2	429.4
Other programs	573.0	15.2	1.9	–11.0	6.0	579.0
Subtotal, mandatory	995.2	20.6	5.2	–12.7	13.2	1,008.4
Net interest	208.1	3.1	–4.4	–0.6	–1.9	206.2
Total outlays	1,838.8	41.7	0.9	–17.4	25.2	1,863.9

¹Actuals do not reflect the accrual funding of Federal retiree costs in the 2003 Budget.

were an increase of \$10.8 billion for agricultural programs, mostly for emergency assistance; an increase of \$5.5 billion for Social Security benefit payments from repealing the Social Security earnings test and correcting a Consumer Price Index error; and an increase of \$4.8 billion for expansion of Medicare benefits.

Economic conditions that differed from those forecast in February 2000 resulted in a net increase in outlays of \$0.9 billion. Outlays for mandatory programs increased an estimated \$5.2 billion, largely due to a higher-than-expected rise in prices, and consequently in cost-of-living-adjustments (COLAs), which increased outlays for Social Security benefit payments, refundable Earned Income Tax Credits, Medicare, and Federal employee retirement benefits. Lower-than-expected unemployment contributed to reduced outlays for Food

Stamps, which partially offset the outlay increases resulting from higher-than-expected COLAs. The increased outlays for mandatory programs were largely offset by a decrease of \$4.4 billion in net interest due to decreased borrowing requirements that resulted from the effect of economic factors on receipts.

Technical estimating differences and other changes resulted in a net decrease in outlays of \$17.4 billion. Outlays for discretionary programs decreased an estimated \$4.1 billion. Outlays for mandatory programs decreased an estimated \$12.7 billion, largely due to lower-than-anticipated outlays for Medicare. Technical changes result from changes in such factors as the number of beneficiaries for entitlement programs, crop conditions, or other factors not associated with policy changes or economic conditions.

Table 18-3. COMPARISON OF THE ACTUAL 2001 SURPLUS WITH THE INITIAL CURRENT SERVICES SURPLUS ESTIMATE

(In billions of dollars)

	Current Services (Feb. 2000)	Changes				Actual
		Policy	Economic	Technical	Total changes	
Receipts	2,009.9	-74.2	33.0	22.3	-18.9	1,991.0
Outlays	1,838.8	41.7	0.9	-17.4	25.2	1,863.9
Surplus	171.2	-115.9	32.1	39.7	-44.1	127.1

Note: Surplus changes are receipts minus outlays. For these changes, a plus indicates an increase in the surplus.

Surplus

The preceding two sections discussed the differences between the initial current services estimates and the actual receipts and outlays for 2001. This section combines these effects to show the net impact of these differences on the surplus.

As shown in Table 18-3, the 2001 current services surplus was initially estimated to be \$171.2 billion. The actual surplus was \$127.1 billion, which was a \$44.1 billion decrease from the initial estimate. Receipts were \$18.9 billion less than the initial estimate, and outlays were \$25.2 billion more. The table shows the distribution of the changes according to the categories in the preceding two sections.

The net effect of policy changes for receipts and outlays reduced the surplus by \$115.9 billion. Economic conditions that differed from the initial assumptions in February 2000 accounted for an estimated \$32.1 billion increase in the surplus. This was the combined effect of an increase in receipts of \$33.0 billion and an increase in outlays of \$0.9 billion. Technical factors increased the surplus by an estimated \$39.7 billion. This was due to an increase in receipts of \$22.3 billion and a decrease in outlays of \$17.4 billion for technical estimating reasons.

Comparison of the Actual and Estimated Outlays for Mandatory and Related Programs for 2001

This section compares the original 2001 outlay estimates for mandatory and related programs under current law in the 2001 Budget (February 2000) with the actual outlays. Major examples of these programs include Social Security and Medicare benefits for the elderly, agricultural price support payments to farmers, and deposit insurance for banks and thrift institutions. This category also includes net interest outlays and undistributed offsetting receipts.

A number of factors may cause differences between the amounts estimated in the budget and the actual outlays. For example, legislation may change benefit rates or coverage; the actual number of beneficiaries may differ from the number estimated; or economic conditions (such as inflation or interest rates) may differ from what was assumed in making the original estimates.

Table 18-4 shows the differences between the actual outlays for these programs in 2001 and the amounts originally estimated in the 2001 Budget, based on laws in effect at that time. Actual outlays for mandatory spending and net interest in 2001 were \$1,214.6 billion, which was \$11.3 billion more than the initial estimate of \$1,203.3 billion, based on existing law in February 2000.

Table 18–4. COMPARISON OF ACTUAL AND ESTIMATED OUTLAYS FOR MANDATORY AND RELATED PROGRAMS UNDER CURRENT LAW

(In billions of dollars)

	2001		
	Feb. 2000 estimate ¹	Actual ²	Change
Mandatory outlays:			
Human resources programs:			
Education, training, employment, and social services	10.7	2.9	–7.8
Health:			
Medicaid	124.2	129.4	5.2
Other	8.1	9.7	1.6
Total health	132.3	139.1	6.8
Medicare	218.3	214.1	–4.2
Income security:			
Retirement and disability	85.2	86.2	1.0
Unemployment compensation	24.6	27.9	3.3
Food and nutrition assistance	31.4	29.4	–2.0
Other	80.6	82.1	1.5
Total, income security	221.9	225.6	3.8
Social security	422.2	429.4	7.2
Veterans benefits and services:			
Income security for veterans	24.3	22.5	–1.8
Other	1.6	0.2	–1.4
Total veterans benefits and services	25.9	22.6	–3.3
Total mandatory human resources programs	1,031.2	1,033.7	2.5
Other functions:			
Agriculture	14.3	21.3	7.0
Mortgage Credit	–4.5	–*	4.5
Deposit insurance	–1.5	–1.4	0.1
Other functions	1.5	1.9	0.4
Total, other functions	9.7	21.7	12.0
Undistributed offsetting receipts:			
Employer share, employee retirement	–38.5	–38.8	–0.3
Rents and royalties on the outer continental shelf	–3.7	–7.2	–3.5
Other undistributed offsetting receipts	–3.6	–1.0	2.5
Total undistributed offsetting receipts	–45.7	–47.0	–1.3
Total, mandatory	995.2	1,008.4	13.2
Net interest:			
Interest on Treasury debt securities (gross)	359.3	359.5	0.2
Interest received by trust funds	–141.9	–144.1	–2.2
Other interest	–9.4	–9.2	0.2
Total net interest	208.1	206.2	–1.9
Total outlays for mandatory and net interest	1,203.3	1,214.6	11.3

* \$50 million or less.

¹ Estimates reflect the function shift for foster care and adoption assistance in the 2003 Budget.

² Actuals do not reflect the accrual funding of Federal retiree costs in the 2003 Budget.

Actual outlays for mandatory human resources programs were \$1,033.7 billion, \$2.5 billion more than originally estimated. This increase was the net effect of legislative action, differences between actual and assumed economic conditions, differences between the anticipated and actual number of beneficiaries, and other technical differences.

Outlays for other functions were \$12.0 billion more than originally estimated, largely due to increases of \$7.0 billion for agriculture programs and \$4.5 billion

for mortgage credit programs. Undistributed offsetting receipts were \$1.3 billion more than expected.

Outlays for net interest were \$206.2 billion, or \$1.9 billion less than the original estimate. This decrease was the net effect of changes in interest rates from those initially assumed, changes in borrowing requirements due to differences in surpluses, and technical factors.

Reconciliation of Differences with Amounts Published by Treasury for 2001

Table 18–5 provides a reconciliation of the receipts, outlays, and surplus totals published by the Department of the Treasury in the September 2001 Monthly Treasury Statement and those published in this budget. The Department of the Treasury made adjustments to the estimates for the U.S. Government Annual Report,

which increased receipts by \$727 million and outlays by \$870 million. Additional adjustments for this budget increased receipts by \$100 million and outlays by \$17 million. The major changes were for student loan reserve funds, highway trust fund revenues, the Federal Communications Commission universal service fund, and the transactions of the United Mine Workers of America benefit funds.

Table 18–5. RECONCILIATION OF FINAL AMOUNTS FOR 2001

(In millions of dollars)

	Receipts	Outlays	Surplus
Totals published by Treasury (September 2001 MTS)	1,990,203	1,863,039	127,165
Miscellaneous Treasury adjustments	727	870	–144
Totals published by Treasury in U.S. Government Annual Report	1,990,930	1,863,909	127,021
United Mine Workers of America benefit funds	150	150	.....
Federal Communications Commission Universal Service Fund	109	87	22
Highway trust fund	–164	.....	–164
Student loan reserve fund .....	.....	–231	231
Other	5	11	–6
Total adjustments, net	100	17	83
Totals in the budget	1,991,030	1,863,926	127,104
MEMORANDUM:			
Total change since year-end statement	827	887	–61

Part II: HISTORICAL COMPARISON OF ACTUAL TO ESTIMATED SURPLUSES

This part of the chapter compares actual surpluses to estimated surpluses over the last two decades. The first section compares the estimate for the budget year of each budget with the subsequent actual surplus. The second section extends the comparison to the estimated surpluses for each year of the budget window—that is, for the current year through the fourth year following the budget year. This part concludes with some observations on the historical record of surplus estimates versus the subsequent actual surpluses.

Historical Comparison of Actual to Estimated Surpluses for the Budget Year

Table 18–6 compares the estimated and actual surpluses or deficits since the deficit estimated for 1982 in the 1982 Budget. The estimated surpluses or deficits here for each budget include the Administration's policy proposals. Therefore, the estimated surplus for 2001 differs from that shown in Table 18–3, which is on a current services basis. Earlier comparisons of actual and estimated surpluses were on a policy basis, so for consistency the figures in Table 18–6 are on this basis.

On average, the estimates for the budget year underestimated actual surpluses (or overestimated actual

deficits) by \$5 billion over the twenty-year period. Policy outcomes that differed from the original proposals reduced the surplus by an average of \$16 billion. Differences between economic assumptions and actual economic performance reduced the surplus an average of \$1 billion. Differences due to these two factors were more than offset by technical revisions, which increased the surplus an average of \$23 billion.

The relatively small average difference between actual and estimated surpluses conceals a wide variation in the differences from budget to budget. The differences ranged from a \$206 billion overestimate to a \$190 billion underestimate. The \$206 billion overestimate, in the 1991 Budget, was due to the combination of weaker-than-expected economic performance (largely the effect of the 1990–91 recession) and unexpectedly large outlays to resolve the savings and loan crisis. The \$190 billion underestimate of the surplus, in the 1998 Budget, stemmed largely from stronger-than-expected economic growth and a surge in individual income tax collections beyond that accounted for by economic factors.

Table 18-6. COMPARISON OF ACTUAL AND ESTIMATED SURPLUSES SINCE 1982

(In billions of dollars)

Budget	Surplus or deficit (-) estimated for budget year ¹	Differences due to			Total difference	Actual surplus or deficit(-)
		Enacted legislation	Economic factors	Technical factors		
1982	-62	15	-70	-11	-66	-128
1983	-107	-12	-67	-22	-101	-208
1984	-203	-21	38	-*	17	-185
1985	-195	-12	-17	12	-17	-212
1986	-180	-8	-27	-7	-41	-221
1987	-144	2	-16	8	-6	-150
1988	-111	-9	-19	-16	-44	-155
1989	-130	-22	10	-11	-23	-152
1990	-91	-21	-31	-79	-131	-221
1991	-63	21	-85	-143	-206	-269
1992	-281	-36	-21	48	-10	-290
1993	-350	-8	-13	115	95	-255
1994	-264	-8	16	52	61	-203
1995	-165	-18	1	18	1	-164
1996	-197	6	53	30	89	-108
1997	-140	1	-4	121	118	-22
1998	-121	-9	48	151	190	69
1999	10	-22	56	81	115	125
2000	117	-42	88	74	119	236
2001	184	-129	32	40	-57	127
Average		-16	-1	23	5	
Absolute average ²		21	36	52	75	
Standard deviation		31	45	68	97	

* \$500 million or less.

¹ Surplus or deficit estimate includes the effect of the budget's policy proposals.² Absolute average is the average without regard to sign.

Because the average surplus difference obscures the degree of under- and overestimation in the historical data, a more appropriate statistic to measure the magnitude of the differences is the average absolute difference. This statistic measures the difference without regard to whether it was an under- or overestimate. Since 1982, the average absolute difference has been \$75 billion.

Another measure of variability is the standard deviation. This statistic measures the dispersion of the data around the average value. The standard deviation of the surplus differences since 1982 is \$97 billion. Like the average absolute difference, this measure illustrates the high degree of variation in the difference between estimates and actual surpluses.

Five-Year Comparison of Actual to Estimated Surpluses

The substantial differences between actual surpluses and the budget year estimates made less than two years earlier raises questions about the degree of variability for estimates of years beyond the budget year. Table 18-7 shows the summary statistics for the surplus differences for the current year (CY), budget year (BY), and the four succeeding years (BY+1 through BY+4). These are the years that are required to be estimated in the budget by the Budget Enforcement Act.

On average, the budget estimates since 1982 understated the surplus in the current year and the budget year, by \$19 billion and \$5 billion respectively. The budget estimates overstated the surplus in the years following, by amounts growing from \$4 billion for BY+1 to \$26 billion for BY+4. While these results suggest a slight tendency to overestimate surpluses toward the end of the budget horizon, the averages are not statistically different from zero in light of the high variation in the data.

The average absolute difference between estimated and actual surpluses grows dramatically over the six years from CY through BY+4, from \$47 billion in the current year to \$75 billion for the budget year, to \$205 billion for BY+4. While under- and overestimates of the surplus have historically tended to average out, the absolute size of the under- or overestimates grows as the estimates extend further into the future. The standard deviation of the surplus differences shows the same pattern. The standard deviation grows from \$60 billion for current year estimates to \$97 billion for the budget year estimates and continues to increase steadily as the estimates extend further out, reaching \$241 billion for BY+4.

The estimates of variability in the difference between estimated and actual surpluses can be used to construct a range of uncertainty around a given set of surplus estimates. Statistically, if these differences are normally distributed, the actual surplus will be within a

range of two standard deviations above or below the estimate about 90% of the time. Chart 18–1 shows this range of uncertainty applied to the surplus estimates in this budget. This chart illustrates that unforeseen

economic developments, policy outcomes, or other factors could give rise to large swings in the surplus estimates.

Table 18–7. DIFFERENCES BETWEEN ACTUAL AND ESTIMATED SURPLUSES FOR FIVE-YEAR BUDGET ESTIMATES SINCE 1982

(In billions of dollars)

Measure	Current year estimate	Budget year estimate	Estimate for budget year plus			
			One year (BY+1)	Two years (BY+2)	Three years (BY+3)	Four years (BY+4)
Average difference ¹	19	5	–4	–12	–28	–26
Average absolute difference ²	47	75	109	147	179	205
Standard deviation	60	97	142	178	207	241

¹ A positive figure represents an underestimate of the surplus or an overestimate of the deficit.

² Average absolute difference is the average difference without regard to sign.

